

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

Environmental Site Assessment: Phase II Guidelines

The Georgia Department of Transportation's (GDOT) Office of Materials and Testing (OMAT) may perform Phase II assessments when the work has been assigned to the Office of Roadway Design or District Design, otherwise a Consultant Prequalified in Area Class 6.05 should perform the work. An Environmental Site Assessment, Phase II is required when the results of a ESA Phase I reveal Recognized Environmental Conditions (RECs) (including Controlled and Historical) have been identified i.) on or adjacent to proposed required Right-of-Way (ROW) and/or ii.) on or adjacent to existing ROW for projects involving ditching, utility work, installation of foundations, storm sewer, or other intrusive construction activities that could encounter or generate hazardous waste during the proposed project construction activities, and/or iii.) a REC that is not on or adjacent to the proposed required or existing ROW that, in the opinion of the environmental professional, has the potential to impact the project through soil, groundwater or utilities, etc., requests should be submitted at the start of the Technical Studies process of the PDP using the same set of preliminary or final right-of way plans provided for all other Environmental Resources. Upon establishing the proposed right-of- way limits, the Phase II assessment is performed in order to locate all UST/HW sites within or adjacent to proposed and existing right-of-way. All Phase II Environmental Site Assessments follow the scope of ASTM Designation: E 1903-11 – Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process.

A. Field Investigation (Phase II)

1. A field investigation should be performed at sites identified as potential UST or hazardous waste sites during the Phase I Environmental Site Assessment.
2. Property Owners should be notified and utilities located prior to beginning the field investigation by OMAT, the Prime Design Engineer or the Environmental Consultant.
3. For properties where the right-of-way is adjacent to a confirmed Recognized Environmental Condition (REC) site or adjacent to a potential REC site, but a release has not been documented in readily available environmental databases:
 - a Drilling should be conducted in the proposed right-of-way as follows:
 - For right-of-way adjacent to a confirmed REC site, or a limited right-of-way acquisition of a confirmed REC with a No Further Action (NFA) from GA EPD, drill at a maximum spacing of 100' between borings, with a minimum of three (3) borings.
 - For right-of-way adjacent to a potential REC site, but a release has not been documented in readily available environmental databases,
 - Right-of-way <500', a maximum spacing of 100' between borings, with a minimum of three (3) borings.
 - 500'> right-of-way ≤1000', a maximum spacing of 200' between borings, with a minimum of four (4) borings.

- Right-of-way >1000', a maximum spacing of 300' between borings, with a minimum of five (5) borings.
- b. Drilling should be conducted to a depth of 25 feet below ground surface or refusal on rock, whichever is less. If groundwater is encountered, groundwater samples should be collected and analyzed for environmental impacts. For soil and groundwater sampling see section A.5.
 - Soil samples should be screened at 5 feet intervals to a depth of 25 feet if above static groundwater level and no auger refusal. All soil samples will be screened with a Photo-Ionization detector (PID), Flame-Ionization Detector (FID) or other GAEPD approved method.
 - If impacts are visually detected or an odor is encountered, the soil sample should be analyzed for environmental impacts.
 - The soil sample with the highest PID/FID reading throughout the boring shall be analyzed.
 - In the case of suspected non-volatile contaminants, the soil sample exhibiting discoloration, deleterious composition (i.e. debris, slag, ash) or other visual indicators shall be analyzed.
 - c. Soil and groundwater sample analytical protocol should be as follows:
 - For REC's and potential REC's that are associated with gasoline and/or diesel sources only; BTEX (benzene, toluene, ethyl-benzene and xylene) and PAH (Polynuclear Aromatic Hydrocarbons)
 - For all other REC's and potential REC's sources; VOC (volatile organic compounds) and SVOC (semi-volatile organic compounds). Soil should also be tested for Total RCRA 13 Metals. Each site should be individually considered and tested for other constituents (Pesticides, Herbicides, PCBs, etc.) as necessary based on the findings from the Phase I Environmental Site Assessment report.
4. For properties where the right-of-way includes acquisition of the known or suspected source or point-of-entry of either a documented or potential release of hazardous waste, special waste or other regulated substances (REC or Potential REC), GDOT's Project Manager and the Prime Design Engineer shall notify the Environmental Consultant whether further investigation is required. If GDOT decides to proceed with potential acquisition of a known or suspected impacted site, the Environmental Consultant will develop a site-specific sampling and analysis plan in accordance with GAEPD USTMP and/or Hazardous Waste guidelines, as appropriate.
 5. Additional guidance on sampling procedures can be found in EPA, Region IV, Environmental Investigations Standard Operating Procedures and Quality Assurance Manual ([EISOPQAM](#)), which can be found online.

B. Phase II Field Investigation Report Preparation

1. Each report should include a cover letter summarizing the investigation and the consultants' recommendations. It is suggested that all reports be kept as brief as possible. The report should be divided into separate sections for each impacted property.

2. If UST systems are located on the right-of-way property, document the system location in the report. Make recommendation for proper closure by qualified consultants of any tanks located within the proposed right-of-way. If UST systems are thought to exist on site, but locations are unknown, provide recommendations for additional exploratory work and closure if tanks are found.
3. Reports should document the screening results and the extent of contamination. If contamination is encountered, determine if the contamination level exceeds notification requirements. This information should be highlighted in the report for GDOT.
4. FHWA has expressed concerns for the location of possible releases and monitoring wells in relation to GDOT projects. All ESA Phase I and ESA Phase II investigations shall identify and reference the location of monitoring wells. Any proposed impacts to monitoring wells, remediation systems, or other items that are part of an ongoing Corrective Action Plan, must be coordinated with EPD by the Project Manager, with the assistance of the Environmental Testing Branch and the Office of Environmental Services.
5. In addition, appropriate recommendations by OMAT for roadway design and right-of-way negotiations should be included.
6. If contamination is encountered, the following considerations should be taken by OMAT when making recommendations.
 - a Determine what effect the contaminants can have on construction of the roadway, including drainage piping and structures.
 - b If the contamination may require clean-up actions, determine what steps must be taken prior to construction and if roadway realignment may be necessary to avoid contaminated parcels.
 - c Recommend any notifications and corrective actions necessary for compliance with GAEPD rules and regulations
 - d Recommend that any contaminated soil excavated during construction be disposed of at a permitted lined municipal solid waste landfill (Subtitle D) or hazardous waste landfill (Subtitle C), as appropriate.
 - e In addition, note that the contractor shall implement the best possible engineering and management controls to ensure adequate protection of employee safety in accordance with Georgia's Rules for Hazardous Waste Management.
7. Additional guidance for these investigations can be found in ASTM Standard Practice for Environmental Site Assessments: Phase II (E 1903-11).
8. Transmit report to the GDOT Project Manager. A copy of this report should be transmitted to the Office of Materials and Testing (OMAT), Environmental Testing Branch for review.
9. After OMAT has reviewed the consultant report and deemed it acceptable for use during design, right-of-way negotiations and construction, the GDOT project manager is responsible for distributing the report to the appropriate offices with a letter of acceptance. These offices include District Environmental Office, Office of Right-of-Way, Office of Environmental Services, and District Right-of-Way offices. A copy of the summary cover letter should also be sent to the District Engineer.
10. Any recommendations made regarding UST/HW sites should be addressed during final plan preparation.